

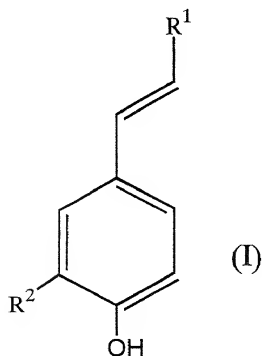
What is claimed is:

1. A method of removing off-flavor from a food, which comprises:

5 causing a polymer of phenol compounds having a styrene structure to be present in the food.

2. The method according to claim 1, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

3. The method according to claim 1, wherein the phenol compounds having a styrene structure are compounds represented by general formula (I):



(wherein  $R^1$  represents hydrogen or carboxy, and  $R^2$  represents hydrogen or lower alkoxy) and the phenol compounds constituting the polymer may be the same or different.

4. The method according to claim 3, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

5. The method according to claim 3, wherein the compounds represented by general formula (I) are selected from the group consisting of 4-vinylphenol, ferulic acid, p-coumaric acid and 4-vinylguaiacol.

6. The method according to claim 5, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

7. The method according to claim 6, wherein the dimer of the phenol compounds having a styrene structure is 2,3-

dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-5-vinylbenzofuran.

8. The method according to any of claims 1 to 7, wherein the polymer is caused to be present in the food at a concentration of at least 0.5 ppb.

9. The method according to any of claims 1 to 7, wherein the polymer is a polymer obtained by subjecting the phenol compounds having a styrene structure to reaction in the presence of oxygen.

10. The method according to claim 9, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out under irradiation with light.

11. The method according to claim 9, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out in the presence of an enzyme source.

12. The method according to claim 10, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out in the presence of an enzyme source.

13. A deodorizer, comprising a polymer of phenol compounds having a styrene structure.

14. The deodorizer according to claim 13, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

15. The deodorizer according to claim 13, wherein the phenol compounds having a styrene structure are compounds represented by general formula (I) set forth in claim 3.

16. The deodorizer according to claim 15, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

17. The deodorizer according to claim 15, wherein the compounds represented by general formula (I) are selected from the group consisting of 4-vinylphenol, ferulic acid, p-coumaric acid and 4-vinylguaiacol.

18. The deodorizer according to claim 17, wherein the

polymer is a dimer of the phenol compounds having a styrene structure.

19. The deodorizer according to claim 18, wherein the dimer of the phenol compounds having a styrene structure is 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-5-vinylbenzofuran.

20. The deodorizer according to any of claims 13 to 19, wherein the polymer is a polymer obtained by subjecting the phenol compounds having a styrene structure to reaction in the presence of oxygen.

21. The deodorizer according to claim 20, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out under irradiation with light.

22. The deodorizer according to claim 20, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out in the presence of an enzyme source.

23. The deodorizer according to any of claims 13 to 19, wherein a concentration of the polymer is at least 10 ppb.

24. A seasoning, comprising a polymer of phenol compounds having a styrene structure.

25. The seasoning according to claim 24, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

26. The seasoning according to claim 24, wherein the phenol compounds having a styrene structure are compounds represented by general formula (I) set forth in claim 3.

27. The seasoning according to claim 26, wherein the polymer is a dimer of the phenol compounds having a styrene structure.

28. The seasoning according to claim 26 wherein the compounds represented by general formula (I) are selected from the group consisting of 4-vinylphenol, ferulic acid, p-coumaric acid and 4-vinylguaiacol.

29. The seasoning according to claim 28, wherein the

polymer is a dimer of the phenol compounds having a styrene structure.

30. The seasoning according to claim 28, wherein the dimer of the phenol compounds having a styrene structure is 2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-7-methoxy-5-vinylbenzofuran.

31. The seasoning according to any of claims 24 to 30, herein the polymer is a polymer obtained by subjecting the phenol compounds having a styrene structure to reaction in the presence of oxygen.

32. seasoning according to claim 31, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out under irradiation with light.

33. The seasoning according to claim 31, wherein the reaction for converting the phenol compounds having a styrene structure into the polymer is carried out in the presence of an enzyme source.

34. The seasoning according to any of claims 24 to 30, wherein a concentration of the polymer is at least 10 ppb.

35. The seasoning according to any of claims 24 to 30, further comprising at least one member of amino acids, organic acids, alcohols and saccharides.

36. The seasoning according to any of claims 24 to 30, wherein the seasoning is a fermented seasoning.

37. The seasoning according to claim 29, wherein the fermented seasoning is vinegar, cooking liquor, sake, wine, mirin, soy sauce or miso.

38. The seasoning according to any of claims 24 to 30, wherein the seasoning is a meat extract seasoning, a marine product extract seasoning or a vegetable extract seasoning.

39. A cosmetic, comprising a polymer of phenol compounds having a styrene structure.

40. An antioxidant, comprising a polymer of phenol compounds having a styrene structure.

41. A method of producing a polymer of phenol compounds having a styrene structure, which comprises converting phenol

compounds having a styrene structure into the polymer in the presence of oxygen.

42. The method according to claim 41, wherein the conversion into the polymer is carried out under irradiation with light in the presence of a photosensitizer.

43. A method of producing a seasoning, which comprises: causing phenol compounds having a styrene structure to be present in any of the steps in a process for producing a seasoning, and conducting an oxidation reaction of the phenol compounds in the presence of oxygen during or after the completion of the process.

44. The method according to claim 43, wherein the oxidation reaction is carried out under irradiation with light.

45. The method according to claim 44, wherein the oxidation reaction is carried out in the presence of a photosensitizer.

46. The method according to claim 43, wherein the oxidation reaction is carried out by blowing oxygen into the reaction system.

47. The method according to claim 46, wherein the oxidation reaction is carried out under irradiation with light.

48. The method according to claim 47, wherein the oxidation reaction is carried out in the presence of a photosensitizer.

49. The method according to any of claims 43 to 48, wherein the oxidation reaction is carried out in the presence of an enzyme which accelerates the oxidation reaction.

50. The method according to claim 49, wherein the enzyme is peroxidase.

51. The method according to any of claims 43 to 48, wherein the seasoning is a fermented seasoning.

52. The method according to claim 51, wherein the fermented seasoning is vinegar, cooking liquor, *sake*, wine, *mirin*, soy sauce or *miso*.

53. A method of deodorizing a food, which comprises cooking the food using the deodorizer according to claim 13.

54. A method of producing a deodorized food, which comprises cooking a food using the deodorizer according to claim 13.

55. A food which is obtained by the method according to claim 54.

56. A method of producing liquor, which comprises:

- 5 (a) a step for preparing a saccahrified rice liquor, wherein a liquefying reaction is taken place by adding rice and liquefying enzyme to water in order to obtain a liquefied mixture, thereafter a saccahrifying reaction is taken place by adding saccharogenic enzyme to the resultant liquefied mixture in order to obtain a saccahrified rice liquor;
- 10 (b) a first fermentation step for adding rice *koji* and yeast to water and fermenting thereof;
- 15 (c) a second fermentation step for adding rice *koji* and the saccahrified rice liquor obtained from the step (a) to the resultant mixture of the first fermentation step and fermenting thereof;
- (d) a third fermentation step for adding the saccahrified rice liquor obtained from the step (a) to the resultant mixture of the second fermentation step;
- 20 (e) a separation step for separating liquid by filtering the resultant mixture of the third fermentation step; and
- (f) an oxidation reaction step for conducting an oxidation reaction of the resultant liquid of the separation step in the presence of oxygen.

25 57. The method according to claim 56, wherein the oxidation reaction is carried out under irradiation with light.

58. The method according to claim 57, wherein the oxidation reaction is carried out in the presence of a photosensitizer.

30 59. The method according to claim 56, wherein the oxidation reaction is carried out by aeration or blowing oxygen into the reaction system.

60. The method according to claim 59, wherein the oxidation reaction is carried out under irradiation with light.

61. The method according to claim 60, wherein the oxidation reaction is carried out in the presence of a photosensitizer.

35 62. The method according to claim 56, wherein the yeast is ferulic acid decarboxylase activity.

63. The method according to any of claims 56 to 62, wherein the oxidation reaction is carried out in the presence of an enzyme which accelerates the oxidation reaction. ✓

64. The method according to claim 63, wherein the enzyme is peroxidase.

65. The method according to any of claims 56 to 62, wherein said liquor is a cooking liquor.

66. The method according to any of claims 56 to 62, wherein said liquor is *sake*.

67. A method of producing liquor, which comprises:  
 (a) a first fermentation step for adding rice, rice *kōji* and yeast to water and fermenting thereof;  
 (b) a second fermentation step for adding intermittently rice, rice *kōji* and water to the resultant mixture of the first fermentation step and fermenting thereof;  
 (c) a separation step for separating liquid by filtering the resultant mixture of the second fermentation step; and  
 (d) an oxidation reaction step for conducting an oxidation reaction of the resultant liquid of the separation step in the presence of oxygen.

68. The method according to claim 67, wherein the oxidation reaction is carried out by aeration or blowing oxygen into the reaction system.

69. The method according to claim 67, wherein in the second fermentation step, water, rice, and rice *kōji* are added twice intermittently to the resultant mixture obtained by the first fermentation step.

70. The method according to claim 69, wherein the oxidation reaction is carried out by aeration or blowing oxygen into the reaction system.

71. The method according to claim 67, wherein in the second fermentation, water, rice, and rice *kōji* are added three times intermittently to the resultant mixture obtained by the first fermentation step.

72. The method according to claim 71, wherein the oxidation reaction is carried out by aeration or blowing oxygen into the

reaction system.

73. The method according to claim 67, wherein the oxidation reaction is carried out under irradiation with light.

5 74. The method according to claim 68, wherein the oxidation reaction is carried out under irradiation with light.

75. The method according to claim 70, wherein the oxidation reaction is carried out under irradiation with light.

76. The method according to claim 72, wherein the oxidation reaction is carried out under irradiation with light.

10 77. The method according to any of claims 74 to 76, wherein the oxidation reaction is carried out in the presence of a photosensitizer. ✓

15 78. The method according to any of claims 67 to 76, wherein the oxidation reaction is carried out in the presence of an enzyme which accelerates the oxidation reaction. ✓

79. The method according to claim 78, wherein the enzyme is peroxidase.

80. The method according to any of claims 67 to 76, wherein the yeast is ferulic acid decarboxylase activity. ✓

20 81. The method according to any of claims 67 to 76, wherein said liquor is a cooking liquor.

82. The method according to any of claims 67 to 76, wherein said liquor is sake.